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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,977	03/27/2001	Thomas Richter	DE000052	9868

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P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

LELE, TANMAY S

ART UNIT	PAPER NUMBER
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2684

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DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/817,977

Applicant(s)

RICHTER, THOMAS

Examiner

Tanmay S Lele

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding claims 1 and 6, Applicant attempts to overcome the rejection, by stating, "Item 3 of the Office Action therefore further acknowledges, in effect, that Kline fails to disclose or suggest 'evaluation mean; for recognizing that a transmission of a data sequence takes place when . . . alternatively one of the further synchronizations (DOT), succeeded by a correct word synchronization (WS), has been recognized and for evaluating data words (REP 1-REP11) received each time . . . subsequent to a recognized further synchronization (DOT) that is succeeded by a correct word synchronization (WS).'" Examiner respectfully disagrees with Applicant's comments. Note as specifically stated in the previous Office Action (paper number 6, pages 3 – 4), Examiner states Kline teaches of "...evaluation means for recognizing... when a starting synchronization (DOT1) has been recognized," and that Kline does not specifically teach of or alternatively... that is succeeded by a correct word synchronization (WS)." Hence, Examiner does not agree with Applicant's assertions as stated on page 8.

2. In response to applicant's argument that "It appears to the applicant that Sriram is silent on the subject of the further synchronization or any such structure, at least in the context of the network element as recited in claim 1 of the present invention," a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and

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the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Regarding claims 1 and 6, Applicant attempts to overcome the rejection by stating, "What in Sriram is deemed to correspond to the "further synchronization (DOT)" recited in claim 1?" and further that, "the passages cited by in item 3 of the Office Action fail to provide even the slightest clue in answering this question. It appears to the applicant that Sriram is silent on the subject of the further synchronization or any such structure, at least in the context of the network element as recited in claim 1 of the present invention," and lastly, "moreover, it is unclear how Sriram suggests a modification of Kline that would meet the limitations of claim 1." Examiner again respectfully disagrees with Applicant's assertions. Beginning with Applicant's comments, Applicant asks, "What in Sriram is deemed to correspond to the "further synchronization (DOT)" recited in claim 1?" Note Sriram teaches of "...a plurality of preamble prefix bits having a predetermined bit pattern..." (column 2, lines 35 – 37), which could potentially correspond to the function of the claimed DOT as indicated in column 5, lines 3 –24 of Sriram.

Continuing with Applicant's comments, it is respectfully believed that Sriram does further teach "...of the further synchronization [or any such structure]...". Note that Sriram teaches of, "...a plurality of word bits following the plurality of preamble prefix bits..." (column 2, lines 37 – 38) and, whose functions could correspond to the claimed WS, as indicated in column 5, lines 25 –

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30. Additionally note that Sriram teaches of "... a bitstream packet," indicating that this structure is being repeated for each packet of the stream being transmitted to the receiver.

Lastly, Applicant states, "As to motivation, which is irrelevant anyway since the proposed combination, however constituted cannot meet the limitations of claim 1 of the present invention, item 3 suggests 'in order to properly demodulate a signal, as taught by Sriram,'" and further that Sriram, however, and particularly the passages cited in item 3, are not seen by the applicant as relating to demodulation." Again Examiner respectfully disagrees with Applicant. Note that Sriram's teachings are for synchronization and detection (column 2, lines 26 –30) and that the purpose of a receiver, as known in the art and alluded to by Sriram, is to demodulate (and thus recover) the data received from a transmitter (hence Sriram teaches of the structure cited in the previous Office Action, as "...a plurality of data bits following the plurality of synchronization word bits..." would follow as data recovery is the intent of every receiver). Hence, because Examiner is required to interpret the claims in the broadest reasonable manner under current examining practice, Examiner is not persuaded by the Applicant's arguments suggesting that the references, when combined for the cited motivation, do not teach or recite the claimed as broadly interpreted.

As no further comments have been provided for claims 2 – 5, Applicant is requested to see the above comments.

(Note that as no amendment to claims was noted, the below is a copy of the action originally presented in paper 5)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1, 4 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kline et al. (Kline, US Patent No. 5,768,268) in view of Sriram (Sriram, US Patent No. 6,331,976).

Regarding claim 1, Kline teaches of a network element of an analog, cellular network, notably a mobile radio set or a base station (column 3, lines 41 – 52; note that the embodiment uses AMPS and thus control signaling is digital as known in the art), including receiving means for receiving a wide-band data sequence (column 2, lines 27 – 60) that is composed of a starting synchronization (DOT1) (column 8, lines 25 – 28), a word synchronization (WS) (column 8, lines 25 – 28), a data word (REP1) (column 8, lines 25 – 28) and a fixed number of repeats of a further synchronization (DOT) (column 8, lines 22 – 31), a word synchronization (WS) (column 8, lines 22 – 31) and the data word (REP2-REP11) (column 8, lines 22 – 31) as well as evaluation means for recognizing that a transmission of a data sequence takes place when a starting synchronization (DOT1) has been recognized (column 11, lines 45 – 56).

Kline does not specifically teach of or alternatively one of the further synchronizations (DOT), succeeded by a correct word synchronization (WS), has been recognized, and for evaluating data words (REP1-REP11) received each time subsequent to a recognized starting synchronization (DOT1) that is succeeded by a word synchronization (WS), or received

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subsequent to a recognized further synchronization (DOT) that is succeeded by a correct word synchronization (WS).

In a related art dealing with synchronization from words, Sriram teaches of or alternatively one of the further synchronizations (DOT) (Figure 3 and column 2, lines 34 – 45 and column 5, lines 3 – 24), succeeded by a correct word synchronization (WS) (Figure 3 and column 2, lines 34 – 45 and column 5, lines 25 – 30 and column 5, lines 34 – 38), has been recognized, and for evaluating data words (REP1-REP11) received each time subsequent to a recognized starting synchronization (DOT1) that is succeeded by a word synchronization (WS) (Figure 3 and column 2, lines 34 – 45 and column 6, lines 7 – 19), or received subsequent to a recognized further synchronization (DOT) that is succeeded by a correct word synchronization (WS) (Figure 3 and column 2, lines 34 – 45 column 5, lines 3 – 24 and column 5, lines 25 – 30 and column 5, lines 34 – 38).

It would have been obvious to one skilled in the art at the time of invention to have included into Kline's wideband data system, Sriram's detection methods, for the purposes of surer detection (and thus synchronization) in order to properly demodulate a signal, as taught by Sriram.

Regarding claim 4, Kline in view of Sriram, teach all the claimed limitations as recited in claim 1. Sriram further teaches of characterized in that the evaluation means include a memory for storing a correct starting synchronization (DOT1) (column 5, lines 38 – 45 column 7, lines 55 – 65 and column 8, lines 15 – 23) and a data buffer which has a capacity at least equal to the starting synchronization for the bit-wise storage and shifting through of the received data (column 8, lines 15 – 29), as well as comparison means for the continuous bit-wise comparison

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of the stored memory contents with the data buffer contents and for determining the number (dd(rx)) of deviating bits (Table 1 column 5, lines 38 – 45 column 7, lines 55 – 65 and column 8, lines 15 – 23) and, the evaluation means being arranged to decide that a starting synchronization (DOT1) has commenced when the number (dd(rx)) of deviating bits is less than a predetermined number (dd.sub.min) (Tables 1 and 2 and column 5, lines 38 – 45 column 7, lines 55 – 65 and column 8, lines 15 – 23), and that a starting synchronization (DOT1) has been correctly received when the number (dd(rx)) of deviating bits reaches zero (Tables 1 and 2 and column 7, lines 1 – 26 and column 7, lines 55 – 65 and column 8, lines 15 – 23).

Regarding claim 5, Kline in view of Sriram teach all the claimed limitations as recited in claim 1. Sriram further teaches of characterized in that the evaluation means are arranged to assume the occurrence of a change over to the second data sequence in the case of disturbed starting synchronizations (DOT1) of two directly successive data sequences after expiration of the temporal length of a data sequence as from the beginning of a first recognized synchronization (DOT) that is succeeded by a correct word synchronization (WS) (Figures 4a – 4c and column 7, lines 1 – 26).

Regarding claim 6, Kline teaches of a method for a network element of an analog, cellular network, notably a mobile radio set or a base station, for receiving a data sequence (column 3, lines 41 – 52; note that the embodiment uses AMPS and thus control signaling is digital as known in the art), that is composed of a starting synchronization (DOT1) (column 8, lines 25 – 28), a word synchronization (WS) (column 8, lines 25 – 28), a data word (REP1) (column 8, lines 25 – 28) and a fixed number of repeats of a further synchronization (DOT), a word synchronization (WS) and the data word (REP2-REP11) (column 8, lines 22 – 31), which

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method includes the following steps: a) continuously monitoring the arrival of wide-band data streams, if any, in order to recognize whether a data transmission intended for the network element takes place (column 2, lines 26 – 36), b) determining whether a starting synchronization (DOT1) can be recognized in received data streams (column 11, lines 45 – 56)

Kline does not specifically teach of or whether a further synchronization (DOT) that is succeeded by a correct word synchronization (WS) can be recognized, and c) evaluating the data words (REP1-REP11) subsequent to a recognized starting synchronization (DOT1) or subsequent to a combination of a further recognized synchronization (DOT) and a correctly received word synchronization (WS).

In a related art dealing with synchronization from words, Sriram teaches of or whether a further synchronization (DOT) (Figure 3 and column 2, lines 34 – 45 and column 5, lines 3 – 24) that is succeeded by a correct word synchronization (WS) can be recognized (Figure 3 and column 2, lines 34 – 45 and column 5, lines 25 – 30 and column 5, lines 34 – 38), and c) evaluating the data words (REP1-REP11) subsequent to a recognized starting synchronization (DOT1) or subsequent to a combination of a further recognized synchronization (DOT) and a correctly received word synchronization (WS) (Figure 3 and column 2, lines 34 – 45 column 5, lines 3 – 24 and column 5, lines 25 – 30 and column 5, lines 34 – 38).

It would have been obvious to one skilled in the art at the time of invention to have included into Kline's wideband data system, Sriram's detection methods, for the purposes of surer detection (and thus synchronization) in order to properly demodulate a signal, as taught by Sriram.

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5. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kline et al. (Kline, US Patent No. 5,768,268) in view of Sriram (Sriram, US Patent No. 6,331,976) as applied to claim 1 above, and further in view of Childress et al. (Childress, US Patent No. 4,905,234).

Regarding claim 2, Kline in view of Sriram teach all the claimed limitations as recited in claim 1. Kline in view of Sriram do not specifically teach of characterized in that the evaluation means are arranged to use a received data sequence as a basis for the selection of a data word when the data sequence yields at least a predetermined number of correctly received repeats of the data word (REP1-REP11).

In a related art dealing with synchronization techniques, Childress teaches of characterized in that the evaluation means are arranged to use a received data sequence as a basis for the selection of a data word when the data sequence yields at least a predetermined number of correctly received repeats of the data word (REP1-REP11) (column 11, lines 35 –50).

It would have been obvious to one skilled in the art at the time of invention to have included into Kline and Sriram's wideband data system, Childress' repeats, for the purpose of providing redundancy (by ensuring data was receive properly several times and thus eliminating the possibility of improper synchronization due to bit errors) to ensure proper synchronization, as taught by Childress.

Regarding claim 3, Kline in view of Sriram teach all the claimed limitations as recited in claim 1. Kline in view of Sriram do not specifically teach of characterized in that the evaluation means are arranged to select for further processing that repeat from the received repeats of a data word (REP1-REP11) in a data sequence that occurs most frequently.

In a related art dealing with synchronization techniques, Childress teaches of characterized in that the evaluation means are arranged to select for further processing that repeat from the received repeats of a data word (REP1-REP11) in a data sequence that occurs most frequently (column 11, lines 21 – 50).

It would have been obvious to one skilled in the art at the time of invention to have included into Kline and Sriram's wideband data system, Childress' repeats, for the purpose of providing redundancy (by ensuring data was receive properly several times and thus eliminating the possibility of improper synchronization due to bit errors) to ensure proper synchronization, as taught by Childress.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanmay S Lele whose telephone number is (703) 305-3462. The examiner can normally be reached on 9 - 6:30 PM Monday – Thursdays and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A. Maung can be reached on (703) 308-7745. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.


Tanmay S Lele
Examiner
Art Unit 2684

tsl
April 12, 2004


NAY MAUNG
SUPERVISORY PATENT EXAMINER